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ABSTRACT

This study compared language and social skills development in 32 developmentally delayed preschool children classified as having speech/language impairments. Social skills were rated by teachers on the Vineland Adaptive Behavior Scales. Language scores were from the Preschool Language Scale administered by speech/language therapists. Statistical analysis was used to determine if there was a significant positive relationship between a child's chronological age, the language score age equivalent, and the social skills age equivalent. Analysis did not find a significant relationship between the children's social skills and their language ability. A possible reason for this finding was the restricted range of functioning in the participating children. (Contains 45 references.) (DB)

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THE RELATIONSHIP BETWEEN SPEECH/LANGUAGE AND SOCIAL SKILLS IN PRESCHOOL CHILDREN WITH DEVELOPMENTAL DELAYS

By

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Abstract

The purpose of this study was to compare language development with social skills development of preschool children. There were 32 developmentally delayed preschool children, 24 males and 8 females, ranging in age from 40 months to 58 months. The participants selected for this study were all classified as speech and language impaired. The social skills of children selected for the study were rated by their teachers on the Social Domain of the Vineland Adaptive Behavior Scales: Classroom Edition (VABS-C). Language scores of the children were available from the Preschool Language Scale-3rd Edition test, administered by the school's speech and language therapists. Correlation coefficient Pierson-r and Spearman's rho was used to determine if there was a significant positive relationship between the scores of the participants on the language and social skills rating procedures. Analysis of Variance was used to determine if there was a significant positive relationship between the participants chronological age, the language score age equivalent, and the social skills age equivalent. Analysis of Variance was also used for repeated measures to determine if there was a positive relationship between the Vineland Adaptive Behavior Scale: Classroom edition and the Preschool Language Scale-3rd Edition. Finally a two-tailed test was used to examine the direction of the difference between the Language score age equivalent and the Vineland score age equivalent. This study did not find a significant relationship between social skills of preschool children and their language ability. One possible reason for the weak relationship may have been the restricted range of functioning in the children who participated. A significant positive correlation might have been found if regular education student scores were included. Future research of the hypotheses should include these scores.

Introduction

The purpose of the study is to compare language development with social skills development of preschool children. This study reflects the expectation that significant language deficits have negative consequences for social skills development because of the reliance of social interaction on both verbal and nonverbal communication. A better understanding of this relationship could help both educators and researchers develop more useful intervention strategies that may raise handicapped children's chances of being socially accepted by their peers and may bring us closer to knowing how to help children develop the skills that are important for their future success. The significance of early assessment of language and social skills is accentuated by the association between childhood social status and adjustment problems later on in life (Bullock, Ironsmith, & Poteat, 1988).

Language is just one aspect of communication behavior which is derived from early social interactions. The term language refers to verbal and nonverbal forms. Communicative behavior, as described by Warren and Warren (1984), is any behavior that sends a social message from one person to another. Communicative behavior is formed during nonverbal social exchanges during infancy and continues through the development of written language (Warren & Warren, 1984). When language development is viewed as a basis for prelinguistic social behavior the strong relationship between the two becomes clear. Language is social behavior and is needed to arbitrate behavior in social interactions (Halliday, 1970). If a child cannot understand and use language skills, the mediation of another child's behavior does not occur, and the listening child cannot act in accordance with the speaker's message. The ability to learn language depends on the ability to distinguish, to construct, to associate, and to react to complex stimuli (Warren & Warren, 1984). Warren & Warren

(1984) also pointed out that the language and socialization gap can be and is usually formed in infancy. In general, a language impaired child is at an extreme disadvantage during early social interactions. Language deficits can cause a disruption between the caregiver's and child's social interactions thereby escalating the disruptive nature of their relationship. Language is an integral part of social skills development and social skills development is essential to the development of communication (Warren & Warren, 1984).

Review of the Literature

To understand the relevance of this investigation, it is necessary to grasp the overall idea of social competence and how deficits in social skills performance influence the qualitative and quantitative features of peer relationships (Pearl & Cosden, 1982). To establish a representative summary of the existing literature, a collection of interrelated issues will be discussed. First, definitions of social skills will be discussed. Second, the development of social skills in both handicapped and nonhandicapped children will be reviewed. Third, how children with speech and language deficits depress their social skills, and finally, assessment measures of children's social skills and speech and language scores will be discussed.

Definition of Social Skills

Some researchers have discovered that the social competence of children is mirrored in the effectiveness rather than the regularity of their interactions with others (Ross & Rogers, 1990; Wright, 1980). Katz (1988) states that these interactions start what he calls a cycle in which the response to the initial interaction strengthens the chances that the other child will respond in an identical way.

According to Gresham (1983, 1984, 1986) there are three widely used definitions of social skills based on the research literature. The first is the peer acceptance definition, the second is the behavioral definition, and the third is the social validity definition. Children, according to Asher and Hymel (1981), are accepted by

their peers if they are evaluated as socially skilled. This idea reflects Gresham's peer acceptance definition. According to this, the social competence of children is revealed essentially in the interactions of children with their peers (Dodge, 1983; Howes, 1987). However, Gresham and Elliot (1984) believe the main disadvantage of the peer acceptance definition is the fact that the specific behaviors that lead to peer popularity are not identified.

The behavioral definition of social skills, according to Bellack (1979) and Strain (1977), is a specific response which can increase positive reinforcement and decrease punishment, based upon a child's social behavior. The main disadvantage of this definition according to Gresham is that it does not assure that the identified behaviors are socially significant and notable (Gresham, 1986).

The social validity definition of social skills depicts those behaviors that predict significant social outcomes such as peer acceptance and adult judgments (Gresham, 1983, 1986; Gresham & Elliott, 1984). Any social act, according to Halle (1985), is a form of communication among people. The primary purpose of language, he states, is to manipulate the environment. He believes that verbal behavior is the same as social behavior and, therefore, the two occupy the same sphere (Halle, 1985).

Social competence has also been defined as the capability of young children to choose and convey their interpersonal objectives (Guralnick, 1986, 1990; Taylor & Asher, 1984). According to Gresham (1983, 1986) social competence is made up of two components: adaptive behavior and social skills. The adaptive behavior of children include language development, physical development, self-help skills and academic skills. Playing appropriately with peers, sharing, initiating and maintaining conversations are good examples of interpersonal behaviors.

These definitions of social competence and social skills are important and essential in denoting and predicting the social outcomes for handicapped and

nonhandicapped young children. They describe the essentials needed to achieve social success in all areas of interpersonal relationships in different social settings.

While the preceding definitions of social skills vary in some ways, they do agree that social competence is a collective finding fixed on behavioral accomplishment and demographic characteristics. These definitions combined delineate the position accepted for this study.

Development of Social Skills

Practically from the beginning of life a child is acquiring social skills. Interactions with the caregiver are essential from the earliest years of life. The child develops social skills during both verbal and nonverbal social exchanges during infancy and continues throughout life (Warren & Warren, 1984). Even as young as six months of age, infants smile, vocalize, gesture, look, touch, and approach other children (Vandell, Wilson & Buchanan, 1980). During the first year of age a child begins to demonstrate sharing, taking toys, and more complex social interactions begin to evolve (Guralnick, 1986). After the child begins the second year, peer interactions increase at a fairly rapid rate. Social intercommunications become more frequent and longer (Eckerman, Whatley & Kutz, 1975; Mueller, 1972). The caregiver's responsiveness and interpretation of a child's behavior influences social communication. In the beginning, the caregiver reacts to nonverbal and voiced behavior and attaches interpretations to the child's social meanings (Guralnick, 1990; Warren & Warren, 1984). As the child becomes older, social meanings become more apparent. The exchange of positive and negative responses between the caregiver and the child are very important in the development of social skills (Gresham, 1981; Guralnick, 1990).

The development of social skills is one of the most important accomplishments of young children. The ability to construct relationships successfully with peers becomes an important influence in the lives of most children. The inability to create

these developments can affect a child's development in significant ways. Children's first meanings are social ones, for example, names for common objects or familiar people (Mueller, 1972; Warren & Warren, 1984). Social relationships are fundamental to the learning of language. Initiating and maintaining social interactions with the primary caregiver, verbal or nonverbal, becomes the basic foundation for good development of social skills (Guralnick, 1986; Warren & Warren, 1984). These interactions help to develop the footing for children before they begin to learn to accommodate their own interests, accept rules, and resolve conflicts with peers.

Important factors that influence the development of social skills include family relationships, sibling interactions, peer experiences, and problem solving skills (Asher & Hymel, 1981; Mueller,1972). Children between the ages of 12 and 24 months begin to develop more elaborate play activities and more social exchanges (Bryan, 1978; Eckerman et al., 1975). Negative interactions between children begin to emerge at this age as well, such as fights over toys, but even these negative interactions contribute to the development of social skills (Eckerman et al, 1975).

An understanding of how young children with handicaps relate to peers can be gained from the research that has emerged regarding the peer relations of normally developing children. Children with language deficits lack the communicative interchanges needed for development of successful social interactions, as primary social relationships are as critical to language learning as language learning is critical to social development (Warren & Warren, 1984).

Speech and Language Impaired Children

According to Warren and Warren (1984), language is a social behavior which is acquired and learned in a social context; it is a basic means for interacting. Warren and Warren describe five basic assumptions regarding the view of language and communication: 1) Language is social behavior 2) Language is based in social interaction and arises from the child's early nonverbal, communicative interchanges

with a primary caregiver 3) Language as a formal and functional system is learned. 4) Elaborated forms of communication are built on simpler forms 5) Finally, language learning occurs in an ecosystem.

Language and every part of a child's development are inter-connected (Bloom & Lahey, 1978). Language is necessary for communication and socialization. Language is seen as just one behavior on the continuum of communication behaviors yet it takes on such an important role in the development of social skills. Disturbance in these interactions, especially at the early social stage, can have a detrimental effect on language development, and children with language disorders experience difficulty in most social situations. Language is needed for social competence development, interpersonal relationships, and intellectual development (Nation & Aram, 1984).

Children who experience language deficits can have problems with expressive or receptive language skills, or both. Children with receptive language deficits may experience difficulties understanding the meaning of words and they may not be able to answer even the simplest of questions. When these children are asked questions they may sometimes respond with a very inappropriate answer because they failed to grasp the meaning of the question.

Children with expressive language deficits may understand the questions being asked, but they will not have the wording, vocabulary, or the motor ability to respond (Wilcox, 1983). When questions are posed to these children they may sound very immature or unintelligible. These children will tend to associate with younger children because they can communicate more effectively with them (Wilcox, 1983).

Children with language disorders can not effectively engage in important developing social processes (Guralnick, 1986). These children will often become frustrated, and conflicts will frequently occur due to misunderstandings. Some of these children develop behavioral control problems due to social rejection and frustration (Aram, 1982). These behavioral control problems only complicate matters even more.

Several studies (Bryan, Donahue & Pearl, 1981; Dukes 1981) have found that children with language deficits also lack the ability to answer questions appropriately, take turns in a conversation, and generate relevant statements. These difficulties add to a continuing problem with peer interaction and relations.

Vygotsky (1962) argues that language is an extremely personal and at the same time a remarkably social human process. He perceives the relationship between the individual and the society as a lingual process which connects and separates the diverse components of human life. Vygotsky describes that through speech children liberate themselves from the constraints of their surroundings. With speech, he further explains, children can plan, order, and control their own behavior and that of others.

Assessment of Social Skills

Most social skills assessment techniques have been developed within the past 25 years (Asher & Hymel, 1981; Gresham, 1986; Gresham & Elliot, 1984). Before discussing the assessment measures, some of the problems in assessing young children will be discussed. Some difficulties with assessing young children include their inability to understand written instructions, as well as limitations in comprehending verbal instructions, and situational cues. Also they have not yet acquired elaborate processing skills. Young children with a handicapping condition are even more likely to present management challenges to assessment. Young children also have short attention spans and have their own agenda in mind; they can be very impulsive and distracted; and, in the case of language impaired children, their speech and understanding is very limited (Martin, 1986).

With all these considerations in mind it is understandable that most assessments rely on teacher and parent rating scales of children's social skills rather than direct measures. Rating scales are pencil and paper, multi-item instruments on which the teacher or parent describe the child's behavior. Although some controversy exists as to the validity and accuracy of teacher and parent ratings, such procedures can be

efficient and socially valid because of the numerous opportunities that teachers and parents have to observe children (Greenwood, Walker, & Hops, 1977; Gresham, 1981; Martin, 1986). In general, teacher rating scales have been shown to be reliable and valid indicators of pupil classroom behavior (Greenwood, Walker, & Hops, 1977). Teacher ratings of social skills have been validated against behavioral observations as well as sociometric data and have been shown to be precise indicators of children's social behavior (Greenwood, Walker , & Hops, 1977).

Specifically, this study investigates the expectation that there will be a significant positive relationship between the scores of the participants on the social skills and language rating procedures.

Method

Participants

The students from four intact classes, totaling 32 students, were involved in the study. Participants were randomly selected from a population of 204 preschool children in a special education school. The ages of the subjects ranged from 40 months to 58 months with a mean of 54 months. As the majority of children in the preschool special education program were four years of age and above, equal numbers of three and four year olds could not be assigned. There were 24 males and 8 females among the 32 students in the study. Equal numbers of males and females could not be obtained due to the large proportion of males in the special education program. The participants selected for this study were all classified as speech and language impaired. Classifications of speech and language impairments were made by a speech therapist at the initial evaluation and by local school districts' Committees on Preschool Special Education.

Procedure

After written permission was obtained, the social skills of children selected for the study were rated by their teachers on the Social Domain of the Vineland Adaptive

Behavior Scales: Classroom Edition (VABS-C). Language scores of the children were available from the Preschool Language Scale-3rd Edition test, administered by the school's speech and language therapists.

Materials

The study used the participants' scores on the following measures: (a) Vineland Adaptive Behavior Scales: Classroom Edition Socialization domain, Interpersonal Relationships Subdomain, (b) Preschool Language Scale-3rd Edition scores from the files.

Vineland Adaptive Behavior Scales; Classroom Edition

The Socialization domain of the Vineland Adaptive Behavior Scales; Classroom Edition (VABS-C) consists of three subdomains: (a) Interpersonal Relationships, (b) Play and Leisure Time, and (c) Coping Skills. The Interpersonal Relationships subdomain was the only subdomain used in this study because according to the literature it was the most likely to be effected. The Interpersonal Relationships subdomain contains 17 items. There are three possible scores for each item, 2, 1, or 0 corresponding to yes, usually; sometimes or partially; and no, never. The Classroom Edition is administered in the form of a questionnaire which is completed by the student's classroom teacher. The Vineland Adaptive Behavior Scale is appropriate for describing adaptive behavior of children between the ages of 3 years through 12 years 11 months.

A standardization sample of 2984 students, ages 3 years through 12 years 11 months, representing schools in 38 states, provided the norms for the Classroom Edition (Sparrow, Balla & Cicchetti, 1985). To ensure adequate representation of the United States population as reported by the 1980 census, stratification variables of sex, race or ethnic group, community size, region of the country, and parents' level of education were used for both editions. Standard scores, national percentile ranks, and stanines are obtained for the Socialization domain in the Classroom Edition. The

standard score has a mean of 100 and a standard deviation of 15 (Sparrow, Balla, & Cicchetti, 1985). Adaptive levels and age equivalents are provided for both the Socialization domain and the three subdomains: Interpersonal Relationships, Play and Leisure Time, and Coping Skills. The adaptive levels are reported as high, moderately high, adequate, moderately low, and low (Sparrow, Balla, & Cicchetti, 1985).

Reliability

One measure of reliability reported in the Vineland Adaptive Behavior Scale: Classroom Edition Manual was coefficient alpha (Sparrow, Balla, & Cicchetti, 1985). Coefficient alpha reflects interitem consistency. Coefficient alpha was used to rate the reliability of the Classroom Edition for reported age groups in the standardization sample. These age groups were divided into one year intervals. The Socialization domain coefficients, according to the Classroom Edition manual (Sparrow, Balla, & Cicchetti, 1985), ranged from .91 to .96, showing that the coefficients for the Socialization domain are sufficient for the interpretation of individual performance.

The standard errors of measurement for the Socialization domain lie between 3.1 to 4.4, with a mean of 3.8. These standard errors of measurement were computed by using a standard deviation of 15 for standard scores along with the coefficient alpha (Sparrow, Balla, & Cicchetti, 1985).

Validity

In the Classroom Edition validity data were reported as construct, content, and criterion related validity. Construct validity was documented in two ways: (1) as developmental progressions of mean raw scores with age which give support to the postulation that adaptive behavior is age related and (2) factor analysis of the domains and subdomains. Content validity of the Vineland Adaptive Behavior Scales: Classroom Edition was used in the development of items. A cautious analysis of other adaptive behavior scales and the writings pertaining to child development conveyed a beginning unit of around 3,000 items grouped in developmentally arranged clusters.

Criterion-Related validity was documented by significant and moderate correlations of the Vineland Adaptive Behavior Scales with various similar tests (Sparrow, Balla, & Cicchetti, 1985).

The Preschool Language Scale-3rd Edition

The main instrument used to measure the language development of the participants was the Preschool Language Scale-3rd Edition (PLS-3) (Zimmer, Steiner, & Pond, 1992). This scale contains two standardized subscales: Auditory Comprehension and Expressive Communication. The PLS-3 also has three supplemental measures: the Articulation Screener, the Language Sample Checklist, and the Family Information and Suggestions Form. The supplemental measures are optional, and the results of these measures are not included in the Auditory comprehension, Expressive Communication, or Total Language scores. The results of these supplemental measures are used to provide additional information about the child and his or her family (Zimmer, Steiner, & Pond, 1992).

The PLS-3 is used to assess expressive and receptive language skills in infants and young children. The two subscales, Auditory Comprehension and Expressive Communication, assist the examiner in deciding if deficiencies are principally receptive or expressive, or if there is a general delay or disorder in communication. Furthermore the PLS-3 evaluates behaviors determined to be language precursors (Zimmer, Steiner, & Pond, 1992).

With the PLS-3 subscales the child's semantics and structure of language are evaluated through tasks that focus on vocabulary, concepts, morphology and syntax. The integration of these language skills is assessed through tasks that focus on thinking skills. The Auditory Comprehension and Expressive Communication subscales measures these areas (Zimmer, Steiner, & Pond, 1992).

Results

The purpose of this study was to compare language development with social skills development of preschool children with developmental delays. This study reflected the expectation that significant language deficits have negative consequences for development because of the reliance of social interaction on both verbal and nonverbal communication.

Data Analysis

Correlation coefficient Pierson-r and Spearman's rho was used to determine if there was a significant positive relationship between the scores of the participants on the language and social skills rating procedures. Analysis of Variance was used to determine if there was a significant positive relationship between the participants chronological age, the language score age equivalent, and the social skills age equivalent. Analysis of Variance was also used for repeated measures to determine if there was a positive relationship between the Vineland Adaptive Behavior Scale: Classroom Edition and the Preschool Language Scale-3rd Edition. Finally a two-tailed test was used to examine the direction of the difference between the Language score age equivalent and the Vineland score age equivalent.

Tests of the Hypothesis

Correlation Coefficient Pearson-r. Correlation analysis was used to assess the degree of association between the Vineland age equivalent scores and the expressive and receptive language equivalent scores. The scores were positively, but not significantly correlated. Results of Pearson Correlation between the Expressive Language scores and the Vineland scores were $r=.15$, $p=.30$. The results of the Pearson Correlation between the Receptive Language scores and the Vineland scores were $r=.13$, $p=.50$.

Spearman's rho. The results of the Spearman's rho between the Expressive Language scores and the Vineland scores were $r=.30$, $p=.10$. The results

of the Spearman's rho between the Receptive Language scores and the Vineland scores were r=.20, p=.30. Statistical analysis again displayed a positive but not significant correlation.

Analysis of Variance. Analysis of variance was used to assess the relationship between the participants' Expressive Language score age equivalent, Receptive Language score age equivalent and the Vineland score age equivalent. Statistical analysis indicated that there was no significant difference among the three groups, F=.60, p=.50.

Chi-Square. Chi-Square was used to assess the relationship between the participants' Expressive Language score age equivalent, Receptive Language score age equivalent and the Vineland score age equivalent. Analysis again revealed no significant relationships, (N= 29) =3.276, p=.20.

t-Test for Paired Samples. A two-tailed test was used to examine the direction of the difference between the Expressive Language score age equivalent and the Vineland score age equivalent, as well as between the Receptive Language score age equivalent and the Vineland score age equivalent. Both tests revealed a positive correlation, but again it was not found to be significant, r=.1, 2-tail sig=.3; r=.1, 2-tail sig=.5, respectively.

Discussion

The purpose of the study was to investigate the relationship between language development and social skills development of preschool children with developmental delays. This reflected the expectation that significant language deficits have negative consequences for development because of the reliance of social interaction on both verbal and nonverbal communication.

Many researchers and educators (e.g.,Gresham, 1986; Guralnick, 1990) in the early intervention and special education field have examined the effects of poor language skills and poor social skills of young handicapped children. A better

understanding of the relationship between the two could help both educators and researchers develop more useful intervention strategies that may raise handicapped children's chances of being socially accepted by their peers and may bring us a little closer to knowing how to help children develop the skills that are important for their future success.

This study did not find a significant relationship between social skills of preschool children and their language ability. One possible reason for the weak relationship may have been the restricted range of functioning in the children who participated. A significant positive correlation might have been found if regular education student scores were included. Future research of the hypotheses should include these scores.

As discussed earlier, many researchers believe that adaptive behavior of children includes language development, and that verbal behavior is the same as social behavior (Halle, 1985; Gresham, 1981). The literature (Gresham & Elliot, 1984; Guralnick, 1986) indicates that handicapped children display significant social skills deficits. Children with language disorders can not effectively engage in important developing social processes (Guralnick, 1986) which cause them to become frustrated and opposed. If language disorders truly cause such deficiencies in social skills of children, then we as educators must attain the necessary research and provide the essential social skills training. However, the findings from this study were not able to document this relationship. The measures used for this study may not have been the best sources of information to determine the relationships, e.g., the Vineland is an indirect measure, reliant on report of another. Direct observation may have been better. Also, the language scale may not adequately estimate skills related to the pragmatics of social interaction. The relationship between speech/language and social skills may be much more complex than can be determined through simple correlation, other factors not measured may contribute.

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